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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

GRENDZYNSKI, MICHAEL E

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 12/17/2001

3

Please find below and/or attached an Office communication concerning this application or proceeding.

A-9-3

Office Action Summary

Application No.

09/591,075

Applicant(s)

SCHULZ ET AL.

Examiner

Michael E. Grendzynski

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 09 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 18 and 38-40 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Currently, the use of the phrases “greater than about” and “less than about” renders the claims ambiguous. For example, what value must the weight percent value equal in order to be “less than about” 80%? As it currently reads, the metes and bounds of the claim cannot be ascertained because the upper/lower level limits of the values cannot be identified. It is suggested applicant delete the term “about” from these phrases.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1, 6, 7, 10, 13-17, 24, 26, 27, 37-44, and 47-49 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Dolsey (US 6120888). See col. 8, ll 41-62 and col. 10, ll 15-40. With regard to claims 15-17, *see* Tables 2-3. With regard to claims 19-21, *see* col. 16, ll 46-47. With specific regard to claims 24, 26, and 27, *see* col. 10, ll 33-40. It is important to note that Applicants, in the specification, define vinylactams as being homopolymers or copolymers. With regard to claim 28, *see* col. 10, ll 8-10.

Art Unit: 1774

With specific regard to claims 37-40, see Tables 2-3 and col. 10, ll 15-32. With regard to claim 44, see col. 10, ll 41-65 and col. 11, ll 38-42. The second layer is equivalent to applicants' protection layer. With regard to claims 47-49, see col. 16, ll 47-49. The limitations of the claims are met by the disclosure of the reference.

3. Claims 1, 6, 10-14 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Herrmann (US 6294592). Herrmann discloses an ink jet printing ink which is printed on nonwoven webs comprising polyester, polypropylene or polyamide. See Abstract and col. 11, ll 24-32. The ink comprises a binder and an organic particles. See col. 1, ll 44-45 and col. 3, ll 51-54. Once printed, the article of the above claims is formed. The limitations of the claims are met by the disclosure of the reference.

4. Claims 1, 2, 6-8, 10, and 26-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kronzer (US 5925712). Kronzer discloses an ink receptive article comprising a nonwoven web (see col. 3) with an ink-receptive coating thereon, wherein the coating comprises polyamide particles (e.g., caprolactam), see col. 4, ll 49-54; and col. 5, l 60. The nonwoven web is formed by spunbonding. See col. 3, ll 26-28. The coating further comprises an inorganic particle (silica). See col. 5, l 18. The limitations of the claims are met by the disclosure of the reference.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 18, and 29-34, are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolsey (US 6120888), as applied to claims 1, 6, 7, 10, and 13-17, 37-44, and 47-49, above. The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants'

Art Unit: 1774

claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. The porosity of a layer and the water-absorbing property of a filler in an ink-receiving layer is a conventional concern in the art, for it controls the amount of liquid that is absorbed by the layers. Additionally, the thickness of an ink-receptive coating layer is a conventional concern in the art, for it not only provides for the desired ink-receiving ability of a medium, but also ensures proper feeding through a printer. As such, these values would be obvious to optimize. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215. To date, this burden has not been sustained.

7. Claims 1-12, 15-21 and 28-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goetzen (US 5989701) in view of the Tyvek® product information bulletin. Applicants claim an ink-receiving article comprising (1) a porous substrate (comprising a nonwoven web) and (2) an ink receiving coating thereon, said ink-receiving coating comprising both inorganic (e.g., silica) and organic particles. Goetzen discloses a recording material comprising a substrate and at least one recording layer thereon. *See Abstract*. The substrate is equivalent to applicants' porous substrate. It comprises a nonwoven webs (i.e., synthetic fibers which are randomly intertangled). *See col. 4, ll 45-47*. For example, Goetzen discloses the specific use of Tyvek®, a nonwoven web polyolefin web that is nonporous. *See Product Bulletin*. The ink receiving coating, moreover, is equivalent to applicants' coating overlaying at least a portion of the substrate. It comprises an organic pigment (*see col. 3, ll 34-36*), a binder (*see col. 2, ll 60-62*), and an inorganic pigment. *See col. 4, ll 10-11*.

With regard to claims 3-5, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. Amount of inorganic filler in a coating layer is a conventional concern in the art, for it controls the cost of the layer and, consequently, the medium. As a result, it would be obvious to optimize. A prima facie case of obviousness may be rebutted, however, where the

Art Unit: 1774

results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215. To date, this burden has not been sustained.

With specific regard to claims 8-9, “even though product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 227 USPQ 964, 966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). *See* MPEP §2113.

With specific regard to claims 15-17, Goetzen discloses a particle size within applicants’ claimed ranges. *See* col. 3, ll 34-65.

With specific regard to claims 19-20, *see* Example 4.

With specific regard to claim 21, the printed product will be dry, i.e., it will not contain any solvent, aqueous or otherwise. Consequently, this limitation is not dispositive on the issue of patentability.

With specific regard to claims 28-31, “it is elementary that the mere recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art.” *In re Swinehart et al.*, 169 USPQ 226 at 229. Since the Goetzen medium teaches all of applicants’ claimed compositional and positional limitations, it is inherent that the medium functions in the manner claimed by applicants. The burden is upon the “applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied upon.” To date, this burden has not been sustained.

Art Unit: 1774

With regard to claims 32-34, Goetzen discloses a coating weight within applicants' claimed range. *See* col. 4, ll 54-59.

With regards to claim 35, *see* col. 4, ll 50-53. It is obvious to provide an adhesive layer to *any* surface, motivated by the desire of laminating that surface to a secondary support.

With regard to claim 36, it is obvious to add perforations to any substrate, motivated by the desire of enabling the separation of the substrate.

With respect to claims 38-40, Goetzen discloses a weight percent value for its binder within applicants' claimed ranges. *See* col. 3, ll 20-23.

With respect to claims 41-43, Goetzen discloses the use of the claimed binders. *See* col. 2, l 60 through col. 3, l 20.

With respect to claim 46, *see* col. 4, ll 48-53.

With respect to claims 47-49, Goetzen discloses a method whereby its recording material is printed via an inkjet printer. *See* col. 5, ll 1-30. Though preferring organic solvent-based inks, Goetzen clearly contemplates the use aqueous inks in printing its material. The use of aqueous inks, moreover, are well known in the art.

8. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goetzen (US 5989701) in view of the Tyvek® product information bulletin, as applied to claims 1-12, 15-21 and 28-49 above, in further view of Ohta (5989771). Ohta teaches that silica and alumina are known inorganic pigments used in ink-receiving layer, providing improved printing and light hiding properties. *See* col. 3, ll 4-14. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose alumina or silica as the inorganic pigment in the Goetzen recording medium, since they are both known pigments in the art, and they are known to provide improved writing and light hiding properties, as taught by Ohta on col. 3, ll 4-14.

Art Unit: 1774

9. Claims 1-12, 15-24, 26, and 28-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Wallace (US 4889765) or Tyvek® Product Bulletin in view of Hirose (US 6203899). Both Wallace and the Tyvek® Product Bulletin disclose that spunbonded polyolefin substrates (e.g., Tyvek®) are porous, but are not inherently receptive to aqueous ink jet inks. *See* col. 1, ll 5-30 and Product Bulletin (disclosing porosity values), respectively. Wallace additionally discloses that images placed on such materials are not necessarily rub resistant. *See* col. 1, ll 17-23. Both Wallace and the Tyvek® Product Bulletin, moreover, disclose that it is necessary to coat Tyvek® with an ink-receptive coating. *See* col. 1, ll 5-30 and Product Bulletin, respectively. Hirose discloses a printing medium comprising, in order, (1) a base material, (2) an ink receiving layer, and (3) a surface layer. *See* Abstract. The surface layer overlays the base material. Hirose does not limit the type of material that may be used as the substrate and, though disclosing an example of paper, discloses that any known supports are suitable. *See* col. 7, ll 38-40. Hirose further teaches that its surface layer comprises a binder, an inorganic pigment (such as alumina or silica) and an organic pigment. *See* col. 4, l 1 through col. 5, l 7. The organic pigment is equivalent to applicants' organic particles comprising vinylpyrrolidone. Applicants, in the specification on p 11, define the pyrrolidone of the instant invention to include both homopolymers and copolymers of vinylpyrrolidone. Hirose discloses that its organic particles comprise copolymers of vinylpyrrolidone. *See* col. 4, l 66 through col. 5, l 7. Hirose teaches that its ink-receptive coating and surface coating layers provide a recording material having improved glossiness and images with high optical density. *See* col. 2, ll 38-50. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the Hirose ink-receptive coating on a spunbonded polyolefin support such as Tyvek®, motivated by the desire of providing a spunbonded polyolefin support with improved ink-receptive and ink retention properties, as disclosed by Hirose on col. 2, ll 38-50.

With respect to claims 3-6, Hirose discloses a weight percent of organic to inorganic (i.e., the cationic fine particles) within a range claimed by applicants. *See* col. 5, ll 33-40.

Art Unit: 1774

With specific regard to claim 9, “even though product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 227 USPQ 964, 966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). *See* MPEP §2113.

With respect to claims 15-17, Hirose discloses a particle size for its organic particles within applicants’ claimed size. *See* col. 5, ll 24-31.

With specific regard to claim 18, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants’ claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. Porosity of a substrate is a conventional concern in the art, for it controls the ink-absorbing property of the substrate. Consequently, it would be obvious to optimize. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215. To date, this burden has not been sustained.

With specific regard to claims 19-21, *see* col.11, ll 26-40. In addition, with regard to claim 21, the printed product will be dry, i.e., it will not contain any solvent, aqueous or otherwise. Consequently, this limitation is not dispositive on the issue of patentability.

With specific regard to claims 28-31, “it is elementary that the mere recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art.” *In re Swinehart et al.*, 169 USPQ 226 at 229.

Art Unit: 1774

Since the Goetzen medium teaches all of applicants' claimed compositional and positional limitations, it is inherent that the medium functions in the manner claimed by applicants. The burden is upon the "applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied upon." To date, this burden has not been sustained.

With specific regard to claims 32-34, Hirose discloses a coating weight of its surface layer within applicants' claimed ranges. *See* col. 11, ll 1-3.

With regard to claim 35, it is obvious to provide an adhesive layer to *any* surface, motivated by the desire of laminating that surface to a secondary support.

With regard to claim 36, it is obvious to add perforations to any substrate, motivated by the desire of enabling the separation of the substrate.

With regard to claims 38-40, Hirose discloses a binder present in an amount within applicants' claimed ranges. *See* col. 4, ll 55-59.

With regard to claims 41-43, *see* col. 4, ll 44-54.

With specific regard to claims 47-49, Hirose discloses that its ink-receiving layer may be imaged via an ink jet printing process using an aqueous ink. *See* col. 11, ll 26-60.

10. Claims 1, 2, 6-11, 15-34, 35-40, 42, 44, 45, and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gustafson (US 6251512) in view of the Tyvek® Product Bulletin. Gustafson discloses a writable matte article comprising a substrate and a water-absorbing layer. *See* Abstract. The water-absorbing layer comprises organic particles, inorganic particles (e.g., silica or alumina), and a binder (e.g. an acrylic polymer). *See* col. 4, ll 8-15; col. 4, ll 34-38, and col. 5, ll 2-17. The polymeric particles include vinyl pyridines and vinyl pyrrolidones. *See* col. 4, ll 34-38. Though not specifically disclosing the use of a nonwoven web as the substrate, Gustafson specifically discloses its substrate layer is not limited. *See* col. 4, ll 4-7. The Tyvek® Product Bulletin discloses that it is a tough durable sheet comprising polyethylene fibers that, once coated with an appropriate ink-receptive layer, may be printed

Art Unit: 1774

with ink. *See* Product Bulletin. It would have been obvious to use Tyvek® as the substrate in the Gustafson article, motivated by the desire of providing a substrate sheet that was a tough, dense, opaque sheet (thus highly durable), as taught by the Tyvek® Product Bulletin.

With respect to claims 8-9, “even though product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 227 USPQ 964, 966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). *See* MPEP §2113.

With respect to claims 15-17, Gustafson discloses a particle diameter size within applicants claimed ranges. *See* col. 4, ll 53-64.

With respect to claims 19-21 and 47-49, *see* col. 3, ll 20-22. It is clear that the ink may be either water- or solvent-based. *See* col. 3, ll 3, ll 7-11.

With respect to claims 28-31, *see* col. 4, ll 39-42. With respect to the claimed water-absorption values, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants’ claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. The water absorption of particles in an ink-receptive layer is a conventional concern in the art for, as Gustafson suggests, it provides the desired amount of ink-absorbing ability to the layer. *See* col. 4, ll 39-42. As such, it would be obvious to optimize. A *prima facie* case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are

Art Unit: 1774

unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215. To date, this burden has not been sustained.

With respect to claims 38-40, *see* col. 4, ll 61-64.

With respect to claims 35 and 44, *see* col. 5, ll 18-64. The release coating is equivalent to applicants claimed protective laminate layer.

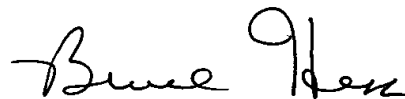
With respect to claim 36, it is obvious to add perforations to any substrate, motivated by the desire of enabling the separation of the substrate.

Conclusion

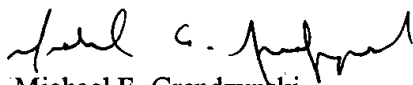
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael E. Grendzynski whose telephone number is 703-305-0593. The examiner can normally be reached on weekdays, from 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 703-308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3599.



**BRUCE H. HESS
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GROUP 1300**



**Michael E. Grendzynski
Assistant Examiner
December 3, 2001**